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By email

Our ref: PM11/AM16/67464.1/MUNRO

30 October 2024

When telephoning please ask for: REDACTED

Dear Sir

H2NorthEast
Request for a direction under section 35 of the Planning Act 2008

We are writing to you on behalf of H2NorthEast Limited in relation to the H2NorthEast Project (the 'Project'), H2NorthEast Limited's proposed hydrogen production project, located in Stockton-on-Tees and part of the East Coast Cluster. Having thoroughly investigated the consenting options available for the Project, H2NorthEast Limited requests that you exercise your power under section 35 of the Planning Act 2008 and direct that the relevant elements of the Project are treated as development for which development consent is required.

The Project will be one of the UK's largest commercial-scale blue hydrogen production facilities with a capacity up to 1,065MW thermal and will involve the commissioning, operation (including maintenance where relevant) and decommissioning of a new carbon capture and storage enabled blue hydrogen production facility and associated hydrogen distribution pipelines. It is proposed that the Project will be developed in two phases:

- Phase one will comprise a hydrogen production facility with a capacity of 355 megawatts ('MW') thermal and associated infrastructure (including for carbon capture), it will also include a hydrogen distribution pipeline to supply the hydrogen produced to various hard to abate energy-intensive industrial offtakers across Teesside and the surrounding area; and

- Phase two will scale-up the size of the hydrogen production facility to increase its capacity to a total of 1,065 MW.

The carbon dioxide ('CO_2') generated by the Project during the hydrogen production process will be captured and compressed for onward transportation and storage, under agreement with the Northern Endurance Partnership (the 'NEP'). NEP transportation infrastructure is expected to be routed adjacent to the Project's southern site boundary.

H2NorthEast Limited requests that the section 35 direction confirms that the following elements of the Project, both together and individually, are to be treated as development for which development consent is required (referred to in this letter and supporting documents as the 'Proposed Development'):

- The hydrogen production facility (phase one);

- The hydrogen production facility (phase two), which may include electricity generation infrastructure with a capacity in excess of 50MW. This would make the generation aspect of the Project a Nationally Significant Infrastructure Project ('NSIP') in its own right under the Planning Act 2008; and

- The hydrogen distribution pipelines which are the subject of an application for development consent that includes either or both phase(s) of the aforementioned hydrogen production facility.

It is proposed that the application for development consent will include all the elements of the Project, including those elements that constitute the Proposed Development, the associated development (as defined by section 115 of the PA 2008) to the Proposed Development and ancillary development.

H2NorthEast Limited requests that your direction confirms that the hydrogen production facility and hydrogen distribution pipeline, both together and individually, are to be treated as development for which development consent is required. In addition, we also request that your direction confirms, pursuant to Sections 35ZA(3)(b) and 35ZA(5) of the Planning Act 2008 that together and individually in respect of the hydrogen production facility and hydrogen distribution pipeline:

1 An application for a consent or authorisation mentioned in section 33(1) or (2) of the Planning Act 2008 is to be treated as a proposed application for which development consent is required;

2 The provisions of or made under the Planning Act 2008 apply in their entirety; and

3 The National Policy Statements apply to the developments which are the subject of this request, and that any application should be determined in accordance with Section 104 of the Act.

If the Project is constructed, it would have the following benefits:

- The production of circa. 1 GW thermal of cost-effective low carbon blue hydrogen to support the UK's ambition to reach 10 GW of hydrogen production by 2030. It is currently projected that phase one of the Project would deliver 355 MW of hydrogen production by 2030 with Phase two of the Project planned to raise this to circa. 1 GW by 2035 (equivalent to 10% of the UK's target). This target was originally 5 GW under the UK Hydrogen Strategy (August 2021) but was doubled by the British Energy Security Strategy (April 2022).

- Help to decarbonise the East Coast Cluster, one of the UK's first carbon capture, usage and storage clusters accounting for 50% of carbon emissions from all UK industrial clusters, by supplying low carbon hydrogen to industry. In doing so supporting the UK's target of achieving net zero emissions by 2050.

- Deliver economic growth on Teesside by attracting further inward investment in low carbon technologies. The Project will also help decarbonise and safeguard existing industries and jobs.

- The Project will deliver low carbon hydrogen at significant scale to support industry decarbonisation across Teesside, an area that is on track to become one of the world's first decarbonised industrial clusters by 2040.

- The Project is in close proximity to the East Coast Hydrogen network tie-in, supporting development of Phase 1 of both East Coast Hydrogen and the wider Project Union.

- Support the development of a hydrogen market both on Teesside and nationally.

- The Project is expected to create more than 500 jobs in the North East and more than 700 jobs across the UK during construction. During operation, it is expected that the Project will create around 100 jobs in the North East and 125 across the UK.

A supporting statement is enclosed with this letter which sets out in detail the anticipated works and the basis for this request. In summary, the Project is a complex, large scale development which spans the administrative boundaries of two borough councils and will require multiple consents and authorisations. Given this complexity, it would be desirable to utilise the streamlined consenting process under the Planning Act 2008 which is suited for such large-scale infrastructure projects. Moreover, a direction under section 35 would ensure that the consenting process can proceed in a timely manner, this would support the objectives of The Overarching National Policy Statement for Energy (EN-1), which identifies that there is an urgent need for all types of low carbon hydrogen infrastructure to allow hydrogen to play its role in the transition to net zero.

We trust this provides you with the information you require and look forward to hearing from you. If you require any further details, please do not hesitate to contact us.

Yours faithfully

BURGES SALMON LLP
Encs:

Supporting statement (including project description and draft section 35 direction).
Figure 1.
Figure 2.

H2NorthEast Supporting Statement for Section 35 Direction

This statement is written in support of H2NorthEast Limited's request that the Secretary of State for Energy Security and Net Zero ('SoS') gives a direction under section 35 of the Planning Act 2008 (the 'PA 2008') for the Proposed Development.

1 BACKGROUND

1.1 It is proposed that an application for development consent pursuant to section 37 of the PA 2008 will be made to the SoS to consent the construction, operation and maintenance of the Project on land within the boroughs of Stockton-on-Tees and Redcar and Cleveland, Teesside.

1.2 The former Prime Minister's 'Ten Point Plan for a green industrial revolution' (November 2020) set out an ambition to deploy carbon capture, usage and storage ('CCUS') at scale in two of the UK's industrial clusters by the mid-2020s, and a further two by 2030. It also set out the Government's commitment to a £1 billion CCUS programme to support the deployment of CCUS at scale in the UK. Phase 1 of the Government's CCUS cluster sequencing process was aimed at identifying and sequencing CCUS clusters that are suited to deployment in the mid-2020s. These clusters will have the first opportunity to negotiate for support from the Government's £1 billion CCUS programme. The East Coast Cluster was selected as a Track-1 CCUS cluster in October 2021 as an area that is best placed to deploy CCUS by the mid-2020s.

1.3 In December 2023, the Department for Energy Security and Net Zero announced that it remains committed to the expansion of the East Coast Cluster and that it is considering the best timing for launching an expansion process from 2024. The Project seeks to provide a source of low carbon hydrogen to local industry as part of the East Coast Cluster. The Project will deliver economic growth on Teesside and provide domestically produced low carbon hydrogen needed to support the decarbonisation of local industrial users and wider UK net zero targets.

1.4 The Project is a large-scale blue hydrogen project with a capacity of circa. 1 GW thermal, which will be developed in two phases. Phase one of the Project will provide 355 MW thermal of carbon capture & storage ('CCS') enabled low carbon hydrogen with a target commercial operations date of 2030. This will be followed by phase two of the Project, which will increase the total capacity of the hydrogen production facility to circa. 1 GW and is expected to take place by 2035 (date subject to change). The Project is currently expected to complete detailed Front End Engineering Design ('FEED') in October 2024.

1.5 The CO_2 generated by the Project during the hydrogen production process will be captured, compressed and transported via a pipeline for storage (by either third parties and/or the NEP). The NEP use the Endurance storage site, which is located approximately 145 kilometres offshore from Teesside under the North Sea. The onshore elements of the NEP project were brought forward under a Development Consent Order ('DCO') application, which was given the name Net Zero Teesside. The DCO application was granted and the Net Zero Teesside Order 2024 was made by the SoS for Energy Security and Net Zero on 16 February 2024. It is anticipated that the NEP infrastructure will be operational by the end of 2027.

1.6 The Project description is set out at Appendix 1 and a suggested draft section 35 direction is provided at Appendix 2 to assist the SoS.

2 NATURE AND EXTENT OF THE PROJECT

2.1 The Project comprises the following elements:

(a) A blue hydrogen production facility of circa. 1 GW total thermal capacity, which will be developed in two phases. The phase one hydrogen production facility will have a capacity of 355 MW thermal, which will be increased to the total of circa. 1 GW in phase two.

(b) Phase two of the Project may include electricity generation infrastructure with a capacity in excess of 50MW. This would make the generation aspect of the Project a Nationally Significant Infrastructure Project ('NSIP') in its own right under the PA 2008.

(c) Hydrogen distribution pipelines to supply hydrogen to various offtakers within the surrounding area, such pipelines to be utilised in association with the hydrogen production facility. The combined length of these pipelines is currently uncertain and will vary depending on a number of factors. It is therefore uncertain at this stage whether they will satisfy the threshold to constitute an NSIP of 16.093km. This is discussed in further detail below.

(d) CO_2 capture and compression facilities and a connection to the NEP CO_2 pipeline, which is expected to be routed adjacent to the southern site boundary, for transportation of the captured CO_2 to the sequestration site. The CO_2 generated by the Project during the hydrogen production process will be captured and compressed for onward transportation and storage, under agreement with the NEP.

(e) An Air Separation Unit ('ASU') to supply oxygen for the hydrogen production process. It is also possible that oxygen and nitrogen supply pipelines could be used to supply oxygen and nitrogen to the Project in combination with, or as an alternative to, the ASU.

(f) Cooling towers.

(g) A flare stack.

(h) A Pressure Swing Adsorption ('PSA') system.

(i) Integration with the existing Central Area Transmission System ('CATS') terminal.

(j) Multiple Above Ground Installations ('AGI') at both the hydrogen production facility and along the pipeline corridor.

(k) A natural gas supply connection for the supply of gas to the hydrogen production plant.

(l) An electricity grid connection to provide power to the Project.

(m) Water supply and treatment infrastructure.

(n) Wastewater storage and disposal infrastructure including a new effluent pipeline and wastewater pipeline with an outfall at Greatham Creek.

(o) Other utilities connections, telecommunications, and other associated and ancillary infrastructure.

(p) Highways, streets and public rights of way diversions and modifications.

(q) Temporary construction laydown areas and contractors' sites.

(r) Environmental mitigation.

2.2 It is proposed that all of these elements will be the subject of the application for development consent (either as the Proposed Development or associated and ancillary development to the Proposed Development).

2.3 The Project will be constructed and operated on land within the boroughs of Stockton-on-Tees Borough Council ('SBC') north of the River Tees and Redcar and Cleveland Borough Council ('RCBC') south of the River Tees (the 'Project Site').

2.4 The proposed hydrogen production facility ('HPF') will be constructed adjacent to the CATS Terminal, a natural gas refinery located in Seal Sands, Teesside, within the administrative boundary of SBC. The proposed hydrogen distribution pipeline will be constructed along predominantly agricultural and industrial land from the HPF to Cowpen Bewley (the western limit of the pipeline). The pipeline will continue east from the HPF, under the River Tees, towards Wilton and into the administrative boundary of RCBC.

2.5 The Project Site is shown on Figure 1. The proposed DCO application boundary, the location of the HPF and the likely options for the main hydrogen pipeline corridor are shown on Figure 2. Both Figures can be found accompanying this request. The location of the HPF and the extent of the hydrogen distribution pipeline and connection corridors are the subject of on-going environmental and technical studies and it is envisaged that these will be refined and final location and corridors will be selected in advance of a DCO application being submitted. The Project Site currently encompasses an area of approximately 721 hectares ('ha').

3 JUSTIFICATION FOR SEEKING A DIRECTION UNDER SECTION 35

The risk that two different consenting regimes could apply to the Project

3.1 Section 14 of the PA 2008 defines the types of development that constitute an NSIP and therefore require development consent under section 31 of the PA 2008. Energy NSIPs include generating stations, electric lines, underground gas storage facilities, LNG facilities, gas reception facilities, gas transporter pipelines and other types of pipelines. With the exception of the hydrogen distribution pipelines and the phase two electricity generation infrastructure, none of the elements of the Project fall under the types of development listed at section 14 of the PA 2008 and therefore cannot be NSIPs.

3.2 In relation to the hydrogen distribution pipelines, depending on a number of factors, it is possible that the pipelines could fall within section 14(g) of the PA 2008 (i.e. the construction of a pipeline other than by a gas transporter). To fall into this category, the pipeline would need to be a 'cross-country pipe-line' for the purpose of section 21 of the PA 2008 (defined under section 66 of the Pipe-Lines Act 1962 as a pipeline whose length exceeds 16.093km). A 'pipe-line' is itself defined under section 65 of the Pipe-Lines Act 1962 as a pipe (together with any apparatus and works associated therewith), or system of pipes (together with any apparatus and works associated therewith), for the conveyance of any thing other than air, water, water vapour or steam. As such, the hydrogen distribution pipelines would constitute an NSIP if they were to exceed 16.093km in length. At present, the final length of pipeline constructed during phase 1 is uncertain and will depend on a number of factors. Therefore, this request is intended to ensure that all aspects of the Project's hydrogen distribution will constitute development for which development consent is required. The terms of the direction request seek to ensure that opportunities to extend the pipelines within the wider area can be pursued in a timely manner post-DCO grant.

3.3 It is noted that phase two of the Project may include electricity generation infrastructure with a capacity in excess of 50MW, which would make the electricity generation aspect of the Project an NSIP in its own right under the PA 2008.

3.4 H2NorthEast Limited has therefore decided to request a direction under section 35 of the PA 2008 to ensure that the Proposed Development is treated as development for which development consent is required. This is considered necessary for the reasons set out below.

Need for the PA 2008 consenting regime

3.5 The Project will be a complex, large scale development made up of many different elements, which are described in paragraph 2.1 above. The Project involves crossing the River Tees and will cover land within the administrative areas of two local authorities (SBC and RCBC). The Project will also encompass numerous plots of land, covering many different landowners and interests with many land

and access rights being required to deliver the Project. The scale of the Project also means it is likely to pass close to, or over, a range of existing infrastructure and apparatus.

3.6 With the exception of the hydrogen distribution pipelines and the electricity generation infrastructure that may be developed as part of phase two, it is unlikely that any element of the Project will fall within the categories of NSIP detailed under the PA 2008. Therefore, if a direction is not made under section 35 of the PA 2008, it will be necessary to seek consent for the Project under the Town and Country Planning Act 1990 ('TCPA'). It is considered that the TCPA consenting process is not appropriate for a Project of this scale, complexity and national significance. For example, it is likely that separate planning applications would need to be made to both SBC and RCBC if the TCPA regime is used. Such an approach would complicate the consenting process and would cause uncertainty when compared to the alternative of a single application for a DCO. Additionally, in respect of the hydrogen distribution pipelines, the section 35 direction would ensure that all elements of the Project are consented under the same regime to prevent a situation where the hydrogen distribution pipelines would be assessed to a different standard to the rest of the elements of the Project.

3.7 Additionally, a section 35 direction would allow the Project to benefit from the firm timescales that apply to the DCO consenting process and help avoid unnecessary delays to the delivery of the Project. Paragraph 3.4.12 of The Overarching National Policy Statement ('NPS') for Energy (EN-1) (designated in February 2024) provides that there is an urgent need for all types of low carbon hydrogen infrastructure to allow hydrogen to play its role in the transition to net zero and so an expedient consenting process would help address this urgent need.

3.8 In addition to planning permission, it is likely that H2NorthEast Limited will need to obtain a range of other consents and approvals from various consenting bodies (e.g. environmental permits, highway consents and potentially hazardous substance consent). If the TCPA process were used to consent the Project, it would be necessary to assess the Project against a number of different policy frameworks, rather than primarily against the NPSs, which would increase uncertainty and risk delay. There is also a risk that these consents and permissions could be granted on different terms, which could hinder the delivery of the Project given its scale and complexity. A section 35 direction would allow H2NorthEast Limited to include these consents and approvals within the DCO application, both simplifying the process and avoiding the risk that delivery of the Project is delayed by individual consenting bodies.

3.9 Furthermore, powers of compulsory acquisition may be required in order to achieve the necessary level of certainty that the Project can be delivered, as a whole, particularly in relation to the hydrogen distribution pipeline and various connections, which cross multiple land parcels with different landowners. A section 35 direction will allow H2NorthEast Limited to seek powers of compulsory acquisition (if required) in relation to all elements of the Project and if justified they may be granted as part of a DCO.

3.10 The PA 2008 regime was introduced to expedite the delivery of complex, nationally significant projects, such as the Project. If a direction were to be granted by the SoS that the Proposed Development is development for which development consent is required, this would assist H2NorthEast Limited in delivering the Project in a timely manner. This would support the delivery of the UK's ambitions for 10 GW of low carbon hydrogen production by 2030 and would advance the decarbonisation of the UK's industrial sector.

4 CONDITIONS OF SECTION 35 (AND SECTION 35ZA)

Relevant conditions

4.1 Section 35(1) of the PA 2008 states that the SoS may give a direction for development to be treated as development for which development consent is required subject to the provisions set out in that section and section 35ZA.

4.2 The conditions of section 35 that are relevant to the Project are that:

(a) the development must either be, or form part of, a project (or proposed project) in the fields specified in section 35(2)(a) (this includes the field of energy);

(b) the development must (when completed) be wholly within the area set out in section 35(3) (in this case England or waters adjacent to England up to the seaward limits of the territorial sea); and

(c) the SoS must think that the project (or proposed project) is of national significance, either by itself or when considered with one or more other projects (or proposed projects) in the same field.

4.3 Condition (b) above is met as the Proposed Development and the Project as a whole will be wholly within England, meeting the criteria of sections 35(2)(b) and 35(3)(a) of the PA 2008.

4.4 Paragraphs 4.9 - 4.10 of this statement sets out why the Project should be considered to be within the field of energy and therefore comply with condition (a).

4.5 Paragraphs 4.11- 4.68 sets out why the Project should be considered to be of national significance and therefore comply with condition (c).

4.6 The conditions of section 35ZA that are relevant to the Project are that:

(a) the power in section 35(1) to give a direction in a case within section 35(2)(a)(i) is exercisable only in response to a qualifying request if no application for a consent or authorisation mentioned in section 33(1) of (2) has been made in relation to the development to which the request relates; and

(b) section 35ZA(11) defines a 'qualifying request' as a written request, for a direction under section 35(1), that:

(i) specifies the development to which it relates, and

(ii) explains why the conditions in section 35(2)(a) and (b) are met in relation to the development.

4.7 In respect of section 35ZA(1), H2NorthEast Limited confirms that no application for consent or authorisation mentioned in section 33(1) or (2) has been made by it in relation to the elements of the Project to which this request relates.

4.8 In respect of section 35ZA(11), H2NorthEast Limited's request represents a 'qualifying request' as it is made in writing and specifies the development to which it relates (please see the section headed 'Nature and Extent of the Project' and Appendix 1 of this statement). It also explains why the conditions of 35(2)(a) and (b) are met.

Compliance with condition (a) of section 35 (field of energy)

4.9 It is considered that the Proposed Development and the Project as a whole fall within the 'field of energy' as required by section 35(2)(a)(i) of the PA 2008 for the following reasons:

(a) The Project will be a large-scale blue hydrogen facility, using natural gas to produce hydrogen to supply various potential industrial offtakers across Teesside and the surrounding area. While the PA 2008 does not define what constitutes the 'field of energy', sections 15 to 21 of the PA 2008 include (under the heading '*Energy*') NSIPs relating to gases used as energy sources / carriers (such as methane), including gas storage facilities, gas reception facilities and gas reception facilities (see sections 17 to 19 of the PA 2008). The Project is producing and

transporting hydrogen, to be used in a similar manner to the gases which are covered by those NSIP categories and so is therefore within the same field. Please note, hydrogen is considered a gas in the UK's Hydrogen Strategy and in section 48 of the Gas Act 1986.

(b) NPS EN-1, the overarching policy for nationally significant energy infrastructure, includes policies relating to hydrogen infrastructure, including blue hydrogen production. Furthermore, paragraph 2.4.4 of NPS EN-1 states that the Government is developing business models to incentivise the deployment of CCUS facilities and low carbon hydrogen production in the UK. It is therefore clear that such infrastructure is considered to fall within the remit of 'energy' by the NPS.

(c) Similar hydrogen infrastructure projects have been granted a section 35 direction in the past, which demonstrates that such developments are capable of being within the 'field of energy'. In particular, a Section 35 direction was made in relation to the H2Teesside DCO on 22 December 2022 by the Secretary of State for Business, Energy and Industrial Strategy. The H2Teesside project is similar to the Project, being a large scale hydrogen production plant and associated hydrogen distribution pipelines within the East Coast Cluster.

4.10 Given the above, it is considered that the Proposed Development and the Project fall within the 'field of energy' and should be capable of being brought within the DCO regime via a section 35 direction.

Compliance with condition (c) of section 35 (national significance)

4.11 Section 35(2)(c) provides that the SoS must be satisfied that a project is of national significance if it is to be granted a section 35 direction. It is considered that the Project is of national significance because of:

(a) its type, size and scale;

(b) the need case for low carbon hydrogen infrastructure established under NPS EN-1; and

(c) the Project's contribution towards climate change policies.

These factors are considered in further detail below.

National significance – Type, size and scale of the Project

4.12 The type, size and scale of the Project are considered to make it one of national significance. In addition to a hydrogen production facility of circa. 1 GW thermal, which would be developed in two phases, the Project also includes a hydrogen distribution pipeline of between approximately 5.4 – 18.2km and the associated and ancillary development described in paragraph 2.1 above. The scale of the hydrogen production facility is clearly of national significance, especially when considered against the threshold for an onshore generating station to constitute an NSIP, which is just 50MW (section 15(2) PA 2008).

4.13 When upscaled, the Project would fulfil over 10% of the UK's target of 10 GW of hydrogen production by 2030 and would also make a significant contribution towards the Government's legally binding target of net zero greenhouse gas emissions by 2050. In particular, it would help to decarbonise industry within Teesside and the surrounding area by supplying existing offtakers with low carbon hydrogen, as well as new businesses attracted to the area by the scale of low carbon hydrogen made available. The Project may also connect into the NEP infrastructure (itself an NSIP) and/or another third-party project for the onward transportation and storage of the CO_2 captured by the Project.

4.14 The Project Site encompasses a substantial area of approximately 721 ha, with the hydrogen distribution pipelines also crossing the River Tees. The Project will also lie within the administrative areas of both SBC and RCBC and will cross many land parcels.

4.15 Further to the above, the Project will represent a major investment in Teesside and the surrounding area, with over £2bn of investment in the circa. 1GW hydrogen production facility, with investment in associated infrastructure and the supply chain delivering more than £205m gross value add benefit in the North East. .

4.16 The Project will also make a significant contribution to the area's economy during both the construction phase and its operation. It is expected that during construction the Project will create more than 500 jobs in the North East and more than 700 jobs across the UK. During operation, it is expected that the Project will create around 100 jobs in the North East and 125 jobs across the UK. There will be significant supply chain opportunities for national, regional and local businesses. The Project will also support the long-term operation of a number of industrial businesses on Teesside and within the surrounding area as the UK transitions to a low carbon economy in order to achieve net zero emissions by 2050 and the interim targets in advance of that.

4.17 Consequently, the type, size and scale of the Project along with its complexity, cost and potential to make significant contributions to the economy and UK climate change targets are considered to make it one of national significance.

National significance – the need case evidenced by NPS EN-1

4.18 In addition to setting out national policy on energy NSIPs, NPS EN-1 provides that the SoS should give substantial weight to the need for low carbon hydrogen infrastructure when considering whether to provide a section 35 direction for hydrogen infrastructure which is not covered by sections 15-21 of the PA 2008 (such as the Project). See paragraphs 3.2.11 and 3.2.12 below:

> 3.2.11 '*Where an energy infrastructure project is not covered by sections 15-21 of the Planning Act 2008 but is considered to be nationally significant, there is a power under section 35 of the Planning Act 2008* […] *for the Secretary of State, on request, to give a direction that a development should be treated as a nationally significant infrastructure project for which development consent is required. This could include novel technologies or processes which may emerge during the life of this NPS*.'
>
> 3.2.12 '*In these circumstances any application for development consent would need to be considered in accordance with this NPS. In particular:*
>
> > […]
> >
> > *where the application is for hydrogen infrastructure not covered by sections 15-21 of the Planning Act, the Secretary of State should give substantial weight to the need established at paragraphs 3.4.12 to 3.4.22 of this NPS*
> >
> > […]'

4.19 Turning to paragraphs 3.4.12 to 3.4.22 of NPS EN-1 and the need for low carbon hydrogen infrastructure, the following paragraphs are particularly relevant to the Project:

> 3.4.12 '*There is an urgent need for all types of low carbon hydrogen infrastructure to allow hydrogen to play its role in the transition to net zero*.'
>
> 3.4.13 '*As set out in the UK Hydrogen Strategy, the government is committed to developing low carbon hydrogen, which will be critical for meeting the UK's legally binding commitment to achieve net zero by 2050, with the potential to help decarbonise vital UK industry sectors and provide flexible deployment across heat, power and transport*.'
>
> 3.4.14 '*The British Energy Security Strategy doubles the ambition set out by the Hydrogen Strategy for up to 10GW of low carbon hydrogen production capacity by 2030, subject to*

> *affordability and value for money, at least half of which will come from electrolytic hydrogen, working with industry to develop a strong and enduring UK hydrogen economy. The Impact Assessment for CB6 shows an illustrative range for low carbon hydrogen of 85-125TWh in 2035 and 250-460TWh in 2050. This demand for hydrogen will need the infrastructure that supports it, including pipelines and storage*.'
>
> 3.4.15 '*Hydrogen can be produced through water electrolysis with low carbon power ('green' hydrogen) or through methane reformation with CCS ('blue' hydrogen). The government's view is that a twin track approach of developing both green and blue hydrogen production will be needed to achieve the scale of low carbon hydrogen production required for net zero*.'

4.20 Consequently, there is a clear need for low carbon hydrogen infrastructure, including pipelines, in order to meet the UK's legally binding commitment to achieve net zero by 2050 and meet the British Energy Security Strategy target of 10GW of low carbon hydrogen production capacity by 2030. It is therefore considered there is an urgent need for the Project, as a large-scale blue hydrogen production facility and associated hydrogen distribution pipeline, which should be given substantial weight when considering whether a section 35 direction should be made. It is also considered that this clearly defined need, set out in a national policy document, supports the position that the Project is one of national significance.

National Significance - Contribution toward climate change objectives

4.21 The Project will support the UK's aim of transitioning the UK to a low carbon economy and meeting the legally binding target of net zero greenhouse gas emissions by 2050. The important role that hydrogen and CCUS must play in achieving this transition is confirmed by Government's energy and climate change policy including:

(a) The Ten Point Plan for a Green Industrial Revolution (November 2020).

(b) The Energy White Paper (December 2020).

(c) Industrial Decarbonisation Strategy (March 2021).

(d) North Sea Transition Deal (March 2021).

(e) UK Hydrogen Strategy (August 2021 and subsequent updates).

(f) Net Zero Strategy: Build Back Greener (October 2021).

(g) British Energy Security Strategy (April 2022).

(h) Hydrogen Net Zero Investment Roadmap (February 2024).

These policy documents are considered below.

Climate change objectives - The Ten Point Plan for a Green Industrial Revolution (November 2020)

4.22 The document titled 'The Ten Point Plan for a Green Industrial Revolution – Building back better, supporting green jobs, and accelerating our path to net zero' was published on 18 November 2020 and aims to lay the foundations for a 'Green Industrial Revolution' in the UK. The foreword from the former Prime Minister states that the Plan will mobilise £12 billion of government investment and potentially three times as much from the private sector, to create and support up to 250,000 green jobs.

4.23 The Introduction to the Ten Point Plan (pages 5 to 6) states that:

> '*We will generate new clean power with offshore wind farms, nuclear plants and by investing up to half a billion pounds in new hydrogen technologies. We will use this energy to carry on*

> *living our lives, running our cars, buses, trucks and trains, ships and planes, and heating our homes while keeping bills low. And to the extent that we still emit carbon, we will pioneer a new British industry dedicated to its capture and return to under the North Sea. Together these measures will reinvigorate our industrial heartlands, creating jobs and growth, and pioneering world-leading SuperPlaces that unite clean industry with transport and power.*'
>
> '*The cumulative effect of this plan will be to reduce the UK emissions by 180 million tonnes of carbon dioxide equivalent (Mt CO2 e) between 2023 and 2032, equal to taking all of today's cars off the road for around two years*.'

4.24 The 'Ten Points' of the Plan are summarised at page 7. Point 2 (driving the growth of low carbon hydrogen) is detailed at pages 10 to 11 and states (at page 10):

> '*Working with industry the UK is aiming for 5GW of low carbon hydrogen production capacity by 2030. Hubs where renewable energy, CCUS and hydrogen congregate will put our industrial 'SuperPlaces' at the forefront of technological development*.'

4.25 The document notes that 5 GW of low carbon hydrogen production capacity by 2030 could see the UK benefit from around 8,000 jobs across its industrial heartlands and beyond. It also notes that the aim will be supported by a range of measures, including a £240 million Net Zero Hydrogen Fund.

4.26 The Project will help deliver the Ten Point Plan by delivering low carbon hydrogen production at scale within the East Coast Cluster on Teesside.

Climate change objectives - The Energy White Paper (December 2020)

4.27 The Energy White Paper titled 'Powering our Net Zero Future' ('EWP'), was presented to Parliament in December 2020 and at its core is the commitment to tackle climate change and achieve net zero. The EWP builds on the Ten Point Plan by establishing a strategy for the wider energy system that transforms energy, supports a green recovery and creates a fair deal for consumers (page 4). As with the Ten Point Plan, the EWP confirms the Government's support for new hydrogen technologies and CCUS drawing upon the resources provided by the North Sea (page 11).

4.28 In the introduction to the EWP (page 15), the Government estimates that the measures in the EWP could reduce emissions across power, industry and buildings by up to 230MtCO_2e in the period to 2032 and enable further savings in other sectors such as transport. In doing so, the measures could support up to 220,000 jobs per year by 2030. These figures include the energy measures from the Ten Point Plan as well as additional measures set out in the EWP. However, the EWP recognises that more will need to be done to meet key milestones on the journey to net zero. The EWP provides an overview of the Government's key commitments to put the UK on a course to net zero (see pages 16 to 17).

4.29 These are grouped under various headings and include:

> '*SUPPORT A GREEN RECOVERY FROM COVID-19*
>
> […]
>
> - *Increasing the ambition in our Industrial Clusters Mission four-fold, aiming to deliver four low-carbon clusters by 2030 and at least one fully net zero cluster by 2040.*
> - *Investing £1 billion up to 2025 to facilitate the deployment of CCUS in two industrial clusters by the mid-2020s, and a further two clusters by 2030, supporting our ambition to capture 10Mt per year by the end of the decade.*
> - *Working with industry, aiming to develop 5GW of low-carbon hydrogen production capacity by 2030.*'

4.30 Chapter 2 (Power) sets out proposals to decarbonise the power sector and the generation of electricity. This includes a commitment to consult on steps to ensure that new thermal plants can convert to low-carbon alternatives, including through retrofitting CCUS or conversion to firing clean hydrogen (page 48).

4.31 Chapter 5 (Industrial Energy) provides that the goal is for emissions from industry to fall by around 90% from today's levels by 2050. At page 118, it is stated that the Government will:

> '*Create a sustainable future for UK manufacturing industry through improved energy efficiency and the adoption of clean energy technologies*.'
>
> '*Establish the UK as a world leader in the deployment of CCUS and clean hydrogen, supporting up to 60,000 jobs by 2030*.'

4.32 The EWP confirms that manufacturing and refineries, which form the bulk of industrial emissions, still account for around 16% of the UK's greenhouse gas emissions (see page 122). About half of those emissions are concentrated in the UK's six major industrial clusters, including Teesside (page 120 and Figure 8.1 page 121) which accounts for 3.9 MtCO2e of emissions by 2018 figures.

4.33 In order to transform industrial energy, the EWP states that we cannot rely on energy efficiency alone to reduce emissions in line with the Government's 2050 goal (see page 122). The manufacturing industry will also need to capture its carbon for onward storage and switch from using fossil fuels to low-carbon alternatives.

4.34 In order to bring about change in industry, the EWP includes a commitment to increase the 'Industrial Clusters Mission' to support the delivery of four low-carbon industrial clusters by 2030 and at least one fully net zero cluster by 2040 (page 124). The EWP states (page 124) that:

> '*We will start with a focus on the UK's industrial clusters – centres where related industries have congregated and can benefit from utilising shared clean energy infrastructure, such as carbon capture utilisation and storage (CCUS) and low-carbon hydrogen production and distribution. Decarbonisation in clusters will enable economies of scale, reducing the unit cost for each tonne of carbon abated. Clusters provide high quality jobs which tend to pay above the UK average wage*.'
>
> '*Many clusters are located in regions in need of economic revitalisation and decarbonising those clusters can act as a driver of prosperity for the surrounding areas. Investments in key technologies like hydrogen and CCUS, together with broader interventions, such as through helping people to retrain, will be crucial to enhancing local economic growth and creating jobs*.'

4.35 Chapter 5 also includes a section on 'Clean Hydrogen' (pages 127 and 128). It identifies that hydrogen will be critical in reducing emissions from heavy industry, as well as in power, heat and transport. Clean hydrogen includes using natural gas and capturing the CO_2 by-product with CCUS or using renewable electricity to split water into hydrogen and oxygen. It includes commitments to:

(a) Work with industry to develop 5 GW of low-carbon hydrogen production capacity by 2030.

(b) Create a Net Zero Hydrogen Fund to support low-carbon hydrogen production, providing £240 million of capital co-investment out to 2024/25.

4.36 Additionally, it is stated that a variety of hydrogen production technologies will be required to satisfy the level of anticipated demand for clean hydrogen in 2050 and that the Government hopes to see 1 GW of hydrogen production capacity by 2025 on route to its 2030 goal.

4.37 It is clear that the Project is consistent with the commitments set out in the EWP to delivering low carbon hydrogen production at scale, including CCUS, within Teesside - one of the UK's major industrial clusters.

Climate change objectives - Industrial Decarbonisation Strategy (March 2021)

4.38 The Industrial Decarbonisation Strategy is the first strategy published by a major economy, which sets out how industry can decarbonise in line with net zero, while remaining competitive and without pushing emissions abroad. It builds on the Ten Point Plan and sets out the Government's vision for a prosperous, low carbon UK industrial sector by 2050, and aims to provide industry with the long-term certainty it needs to invest in decarbonisation.

4.39 The Ministerial Foreword (page 6) emphasises that the 2020s will be crucial to industrial decarbonisation, beginning the journey of switching from fossil fuel combustion to low carbon alternatives such as hydrogen.

4.40 Chapter 1 (Why we need a strategy and our approach) sets out the Government's ambition for decarbonising industry in line with net zero. The expectation is that emissions will need to fall by around two-thirds by 2035 and by at least 90% by 2050 relative to emissions in 2018. It is expected that in all future scenarios, around 3 $MTCO_2$ needs to be captured through CCUS by 2030. It is also expected that in all future scenarios, at minimum, 20 TWh per year of fossil fuel use must be replaced with low carbon alternatives such as hydrogen in 2030. Significantly, the Strategy (page 20) recognises that government should play a key role in the delivery of large infrastructure projects for key technologies such as hydrogen networks where there is a shared benefit and the risk or cost is too great for the private sector.

4.41 Chapter 2 (Getting investors to choose low carbon) confirms the Government's commitment (Action 2.2) to put in place funding mechanisms to support the deployment and use of CCUS and low carbon hydrogen infrastructure. It states that (pages 29-30):

> '*CCUS will be crucial to reaching net zero, and low carbon hydrogen has the potential to play a key role in enabling the economic transformation of the UK's industrial regions. With both technologies at early stages of development, government will need to play an active role in overcoming market failures; sharing the risk and costs of scaling up deployment of both CCUS and low carbon hydrogen*.'
>
> '*We have already committed to a £1 billion CCS Infrastructure Fund to provide industry with certainty required to deploy CCUS at pace and scale, alongside a £240 million Net Zero Hydrogen Fund. Later this year, we will bring forward further details of the revenue mechanism that will support business models for both industrial carbon capture and low carbon hydrogen projects*.'

4.42 Chapter 4 (Adopting low-regret technologies and building infrastructure) explains that, with regard to fuel switching the Government is committed to developing a low carbon hydrogen economy in the UK (Action 4.2, pages 51 and 52). The Government sees it as critical to demonstrate fuel switching to hydrogen in industrial sites in parallel to ramping up low carbon hydrogen production.

4.43 The Project will make a significant contribution to industrial decarbonisation in the UK through the production and supply of low carbon hydrogen to a number of industrial offtakers on Teesside and within the surrounding area.

Climate change objectives - North Sea Transition Deal (March 2021)

4.44 The North Sea Transition Deal is a transformational sector deal for the offshore oil and gas sector in recognition of the key role that it can play in helping the UK meet its net zero commitments. The document recognises that (Foreword, page 6):

> '*As output from the* [UK Continental Shelf] *declines, domestic demand is also projected to decline, and there is a clear need for determined action to be taken to build on the proven capabilities within the sector to support the transition to net zero. The UK already has the*

> *capability and skills within the existing sector to lead in new and emerging energy technologies such as Carbon Capture, Usage and Storage (CCUS) and the hydrogen economy as well as to support the growth of new sectors such as offshore wind*.'
>
> '*Delivering large-scale decarbonisation solutions will strengthen the position of the existing UK energy sector supply chain in a net zero world, securing new high-value jobs in the UK, supporting the development of regional economies and competing in clean energy export markets*.'

4.45 The Executive Summary (page 8) states that the North Sea Transition Deal is aimed a delivering on the commitments set out in the oil and gas chapter of the EWP and is closely aligned with the Prime Minister's Ten Point Plan. It seeks to do this through the implementation of a number of commitments and measures, including supporting up to 40,000 direct and indirect supply chain jobs in decarbonising UK Continental Shelf production and the CCUS and hydrogen sectors.

4.46 The Deal is built on five key outcomes (pages 10 to 11): supply decarbonisation; CCUS; hydrogen; supply chain transformation; and people and skills. These are seen as being closely interlinked, meaning that they must be delivered as an integrated whole for the Deal to achieve its full potential.

4.47 With regard to hydrogen, the Deal notes that:

> '*Hydrogen is essential to meeting our net zero commitment in the UK. It could provide a clean source of energy across the economy, from industrial and domestic heat, to heavy transport, and flexible power and energy storage. The UK already has world-leading offshore wind potential and electrolyser capability, alongside unparalleled carbon capture and storage sites that the UK can maximise to scale up low carbon hydrogen production*.'
>
> '*The hydrogen commitment in the North Sea Transition Deal focuses on creating the economic environment in which low carbon hydrogen production can flourish. This will help unlock billions of pounds of investment from the sector. The oil and gas sector is positioned to enable the production of low-carbon hydrogen at scale as part of a long-term competitive market, supporting the UK's ambition to deliver 5GW of low carbon hydrogen production capacity by 2030*.'

4.48 The Project is well placed to support the commitments set out in the North Sea Transition Deal, being able to link into the NEP (part of the East Coast Cluster), which will make use of offshore skills, capabilities and resources.

<u>Climate change objectives - UK Hydrogen Strategy (August 2021)</u>

4.49 The UK Hydrogen Strategy sets out the Government's approach to developing a thriving low carbon hydrogen sector in the UK to meet its ambition for up to 5 GW of low carbon hydrogen production capacity by 2030.

4.50 Chapter 1 (The case for low carbon hydrogen) (page 7) confirms that low carbon hydrogen will help meet the UK's legally binding commitment to achieve net zero by 2050 and the Sixth Carbon Budget in the mid-2030s. Hydrogen can support the deep decarbonisation of the UK economy, particularly in the "hard to electrify" UK industrial sectors, and can provide greener, flexible energy across power, heat and transport. It goes onto state (page 8):

> '*Today most hydrogen produced and used in the UK and globally is high carbon, coming from fossil fuels with no carbon capture; only a small fraction can be called low carbon. For hydrogen to play a part in our journey to net zero, all current and future production will need to be low carbon*.'

4.51 Section 1.3 of Chapter 1 (The UK's hydrogen opportunity) (page 10) sets out the Government's 'twin track' approach to hydrogen production, which capitalises on the UK's potential to produce large

quantities of both electrolytic green and CCUS enabled blue hydrogen. It states that the UK has the technology, know-how and storage potential to scale up CCUS across the country, unlocking new routes to CCUS-enabled hydrogen production. It goes onto state:

> '*Early deployment of CCUS technology and infrastructure will likely be located in industrial clusters. Many of these are in coastal locations, with important links to CO2 storage sites such as disused oil and gas fields. Government aims to establish CCUS in four industrial clusters by 2030 at the latest, supporting our ambition to capture 10Mt/CO2 per annum*.'

> '*In turn, industrial clusters and wider industry are significant potential demand centres for low carbon hydrogen. Today, numerous industrial sectors from chemicals to food and drink are exploring the role that hydrogen can play in their journey to net zero. UK Research and Innovation's (UKRI's) Industrial Decarbonisation Challenge provides up to £170 million – matched by £261 million from industry – to invest in developing industrial decarbonisation infrastructure including CCUS and low carbon hydrogen*.'

4.52 Figure 1.3 at Chapter 1 (page 11) identifies Teesside as a location for both green (electrolytic) and blue (CCUS enabled) hydrogen production.

4.53 Section 2.2 of Chapter 2 (Hydrogen production) (page 33) highlights to high potential of CCUS-enabled blue hydrogen production, stating that:

> '*Our Hydrogen Production Cost 2021 report suggests that, under central fuel price assumptions, CCUS-enabled methane reformation is currently the lowest cost low carbon hydrogen production technology. Given the potential production capacity of CCUS-enabled hydrogen plants, we would expect this route to be able to deliver a greater scale of hydrogen production as we look to establish a UK hydrogen economy during the 2020s*.'

4.54 Section 2.4.1 of Chapter 2 (Use of hydrogen in industry) (pages 52 and 53) state that:

> '*It is clear that UK industrial sectors will play a vital role in developing a hydrogen economy over the next decade. Industry produced 16 per cent of UK emissions in 2018, and hydrogen will be critical to decarbonise industrial processes that would be hard to abate with CCUS or electrification. The Industrial Decarbonisation Strategy published earlier this year sets out the policy and technology principles to decarbonise industry by 2050, including the installation of deep decarbonisation infrastructure such as hydrogen and CCUS networks in the 2020s*.'

> '*Our industrial heartlands will likely lead the way for large scale low carbon hydrogen supply, and industrial users are expected to provide the most significant new demand for hydrogen by 2030 through industrial fuel switching. Today's hydrogen economy will need to scale up from its current base in the oil refining and chemical sectors, to enter other parts of industry and the wider energy system. We will develop policy to support and deliver this change, and to drive the decarbonisation of existing industrial hydrogen use*.'

4.55 Following the publication of the UK Hydrogen Strategy, the British Energy Security Strategy (April 2022) has since doubled the UK's hydrogen production ambition from 5 GW to 10 GW by 2030. This change is noted in the Hydrogen Strategy Update to the Market (July 2022).

<u>Climate change objectives - Net Zero Strategy: Build Back Greener (October 2021)</u>

4.56 The 'Net Zero Strategy: Build Back Greener' expands on key commitments in the Ten Point Plan and the EWP and sets out the next steps the Government proposes to take to cut emissions, seize green economic opportunities and leverage further private investment into net zero. The Strategy sets an indicative delivery pathway for emissions reductions to 2037 by sector. It is intended to put the UK on the path for the Sixth Carbon Budget and ultimately on course for net zero by 2050.

4.57 In relation to power, the strategy states that the UK will fully decarbonise its power system by 2035 subject to security of supply (Executive Summary, page 19). It goes on to state (page 19):

> '*Our power system will consist of abundant, cheap British renewables, cutting edge new nuclear power stations, and be underpinned by flexibility including storage, gas with CCS, hydrogen and ensure reliable power is always there at the flick of a switch*.'

4.58 In relation to fuel supply and hydrogen, the strategy states that the Government has set up the Industrial Decarbonisation and Hydrogen Revenue Support scheme to fund its new hydrogen and industrial carbon capture business models, which will provide up to £140 million to establish the scheme (Executive Summary, page 20). This is in addition to £240 million Net Zero Hydrogen Fund referred to above.

4.59 It is clear that the Project supports this strategy as it will form part of the East Coast Cluster. It also aligns with the aim of growing new industries in low carbon hydrogen.

Climate change objectives - British Energy Security Strategy (April 2022)

4.60 The British Energy Security Strategy was published in April 2022, largely in response to soaring energy prices caused by the COVID-19 pandemic and Russian invasion of Ukraine. Much of the focus of the Energy Strategy is upon providing financial assistance to families and businesses struggling with higher energy bills, but it also looks at improved energy efficiency, reducing the amount of energy needed and addressing the UK's underlying vulnerability to international oil and gas prices by reducing the UK's dependence on imported oil and gas.

4.61 Importantly, the British Energy Security Strategy doubles the UK's ambition to up to 10 GW of low carbon hydrogen production capacity by 2030 (page 22). This target includes the production of CCS enabled blue hydrogen, such as that will be produced by the Project.

4.62 The Project has the potential to make a significant contribution of approximately 10% of the hydrogen production needed for this target, subject to being scaled up as part of a second phase.

Hydrogen Net Zero Investment Roadmap (February 2024)

4.63 The hydrogen investment roadmap showcases the UK's hydrogen offer and the scale of the UK's ambition for the role of the hydrogen economy in meeting net zero. The document details investment opportunities across the hydrogen value chain and includes details of key elements of the UK policy framework which together represent the next substantial step forward in developing a thriving UK hydrogen economy.

4.64 Page 9 of the document highlights that hydrogen demand could be 20-35% of UK's final energy consumption by 2050, with 25 - 55 TWh of demand from industry by 2035 and 5 - 30 TWh of demand from power by 2035.

Recent Policy Support

4.65 The Government announced in early October that it would be providing up to £21.7bn of funding over 25 years to support the development of the first CCUS clusters including on Teesside and the Northwest.[1] The stated intention of this is to make the UK an early leader in the growing global sectors of CCUS and hydrogen. This will help support East Coast Cluster projects, including NEP.

Climate change objectives - Summary

4.66 The policy documents mentioned above make it clear that hydrogen and CCUS will play a significant role in achieving the UK's transition to a low carbon economy, the Sixth Carbon Budget and the UK's

[1] https://www.gov.uk/government/news/government-reignites-industrial-heartlands-10-days-out-from-the-international-investment-summit

legally binding target of net zero greenhouse gas emissions by 2050. Hydrogen is noted as being particularly beneficial for decarbonising the industries that are hard to electrify.

4.67 The Project is located within the East Coast Cluster, identified in the policy documents as one of the UK's major industrial clusters. The Project will produce low-carbon hydrogen and will have the potential to supply it to industrial offtakers, helping to decarbonise the cluster. Moreover, the CCS technology used by the project will enable the transport and storage of CO_2 generated during the hydrogen production process through the NEP and/or other third-party infrastructure.

4.68 The significant role that the Project may play in supporting the UK's climate change and decarbonisation objectives further emphasises its national significance.

5 SUMMARY

5.1 A section 35 direction is sought for the Project because it meets the legal tests and is of national significance for the following reasons:

(a) Its type, size, scale and complexity.

(b) NPS EN-1 identifies an urgent need for low carbon hydrogen infrastructure, which the SoS should give substantial weight to when considering hydrogen infrastructure that is not covered by sections 15-21 of the Planning Act 2008.

(c) It has the potential to make significant contributions to the economy and the UK's climate change targets, including 355 MW of hydrogen production by 2030 (equivalent to approximately 3.3% of the UK's target of 10 GW of hydrogen production by 2030) with Phase two of the Project raising this to circa. 1 GW by 2035 (equivalent to 10% of the UK's target).

5.2 H2NorthEast Limited is seeking a direction from the SoS under section 35 of the PA 2008 to ensure that the Proposed Development of the Project is development for which development consent is required. Such a direction would provide certainty as to the inclusion of all the infrastructure within any application for development consent that is submitted. It would avoid the need to obtain a number of consents with differing timescales and involving multiple consenting bodies. It would provide certainty in terms of the timing of decision-making and also provide scope for powers of compulsory acquisition to be sought which may be required in order to deliver the Project.

5.3 This letter represents a 'Qualifying Request' under section 35 and section 35ZA of the PA 2008. The Project is within the field of energy and would be wholly within England and the adjacent marine area. The Project is of national significance by virtue of its type, size, scale and complexity and in terms of how it would support important Government objectives for decarbonising industry in line with recent energy and climate change policy. It would also support the Government's target (enshrined in law) of achieving net zero greenhouse gas emissions by 2050.

Appendix 1– Project Description

The H2NorthEast Project comprises the construction, commissioning, operation (inclusive of maintenance) and decommissioning of a CCS enabled blue hydrogen production facility with a capacity of circa. 1GW thermal located in Stockton-on-Tees and part of the East Coast Cluster. The Project will be developed in two phases: phase one will comprise a hydrogen production facility of 355 MW thermal capacity and associated infrastructure, and phase two will increase this capacity to a total of circa. 1 GW thermal. The Project will produce hydrogen and distribute it via hydrogen distribution pipelines, for use by various potential industrial offtakers across Teesside and the surrounding area. CO_2 produced during the hydrogen production process will be captured and transported via NEP and/or other third-party infrastructure for storage.

Table 1: The proposed Projects of National Significance:

No.	Element of Project
1	Hydrogen production facility (phase one) comprising a hydrogen production facility of 355 MW thermal capacity.
2	Hydrogen production facility (phase two) comprising an increase in the capacity of the aforementioned hydrogen production facility to a total capacity of 1,065 MW thermal.
3	Electricity generation infrastructure with a capacity in excess of 50MW, to be developed as part of phase two of the Hydrogen production facility.
4	Hydrogen distribution pipelines which will supply hydrogen to various offtakers within the surrounding area, such pipelines to be utilised in association with the hydrogen production plant. The hydrogen pipelines will run up to tie-in points with the relevant offtaker (likely to be, but not necessarily having to be) at each offtaker's site boundary. Any works beyond the tie-in points will be progressed separately by the relevant offtaker.

Table 2: The Associated Development includes but is not limited to:

No.	Element of Project
1	A connection to the NEP CO_2 pipeline
2	An ASU to supply oxygen for the hydrogen production process (it is also possible that oxygen and nitrogen supply pipelines could be used to supply oxygen and nitrogen to the Project in combination with, or as an alternative to, the ASU)
3	Cooling towers
4	A flare stack
5	A PSA system
6	Integration with the existing CATS terminal
7	Multiple AGIs at the hydrogen production facility and along the pipeline corridor
8	A natural gas supply connection for the supply of gas to the hydrogen production plant
9	An electricity grid connection to provide power to the Project

10	Water supply and treatment infrastructure
11	Wastewater storage and disposal infrastructure including a new effluent pipeline and wastewater pipeline with an outfall at Greatham Creek
12	Other utilities connections, telecommunications, and other associated and ancillary infrastructure
13	Highways, streets and public right of way diversions and modifications.
14	Temporary construction laydown areas and contractors' sites.
15	Environmental mitigation.
16	CO_2 capture and compression facilities.

Appendix 2 - Draft Form of section 35 direction

DIRECTION BY THE SECRETARY OF STATE UNDER SECTION 35 OF THE PLANNING ACT 2008 (AS AMENDED) RELATING TO THE H2NORTHEAST PROJECT

By letter to the Secretary of State received on [insert date] 2024, H2NorthEast Limited formally requested ('the direction request') that the Secretary of State should exercise the power vested in him under section 35(1) of the Planning Act 2008 (as amended) to direct that the H2NorthEast Project as set out in the direction request be treated as development for which development consent under the Planning Act 2008 is required.

The following elements of the H2NorthEast Project constitute the "proposed Project" for the purposes of this direction:

- Hydrogen production facility (phase one) comprising a hydrogen production facility of 355 MW thermal.
- Hydrogen production facility (phase two) comprising an increase in the capacity of the aforementioned hydrogen production facility by approximately 710 MW to a total capacity of 1,065 MW thermal.
- Hydrogen distribution pipelines that do not constitute nationally significant infrastructure projects (NSIPs) under the Planning Act 2008. These will supply hydrogen to various offtakers within the surrounding area, such pipelines to be utilised in association with the hydrogen production plant. The hydrogen pipelines will run up to tie-in points with the relevant offtaker (likely to be, but not necessarily having to be) at each offtaker's site boundary. Any works beyond the tie-in points will be progressed separately by the relevant offtaker and are not the subject of this direction.

The Secretary of State is satisfied that:

- The proposed Project is in the field of energy and will be wholly within England and waters adjacent to England up to the seaward limits of the territorial sea and the Renewable Energy Zone when completed;
- The proposed Project is of national significance;
- The proposed Project does not currently fall within the existing definition of a "nationally significant infrastructure project" and it is appropriate, therefore, to consider use of the power in section 35(1) of the Planning Act 2008; and
- the direction request constitutes a "qualifying request" in accordance with section 35ZA(11) of the Planning Act 2008.

Having considered the details of the direction request as set out in the 's letter on behalf of H2NorthEast Limited of [insert date], the Secretary of State is of the view that the proposed Project is nationally significant for the reasons set out in the Annex below. For the avoidance of doubt, if the hydrogen distribution pipelines do constitute NSIPs, the Secretary of State is satisfied that the hydrogen production plant is still on its own nationally significant.

The Secretary of State considers that, if the details of the proposed Project materially change, before submitting any application to The Planning Inspectorate, H2NorthEast Limited may wish to seek confirmation from the Secretary of State that the development that is the subject of the proposed application is the same as that for which the Direction is hereby given.

The Secretary of State has taken the decision within the conditions as required by sections 35A of the Planning Act 2008, and issues this Direction accordingly under sections 35(1) and 35ZA of the Planning Act 2008.

THE SECRETARY OF STATE DIRECTS that the proposed Project is to be treated as development for which development consent is required.

THE SECRETARY OF STATE FURTHER DIRECTS in accordance with sections 35ZA(3)(b) and (5) of the Planning Act 2008 that:

- an application for a consent or authorisation mentioned in section 33(1) or (2) of the Planning Act 2008 or similar to that described in this Direction for the proposed Project is to be treated as a proposed application for which development consent is required; and

- the Overarching Policy Statement for Energy (EN-1) has effect in relation to an application for development consent under this Direction in a manner appropriately equivalent so far as the considerations and impacts described in EN-1 are relevant to the Proposed Developments.

This Direction is given without prejudice to the Secretary of State's consideration of any application for development consent which is made in relation to the proposed Project.

Signed by [name of person signing]

[position or role of named person]

Authorised to sign on behalf of the Secretary of State

[date]

ANNEX

REASONS FOR THE DECISION TO ISSUE THE DIRECTION

The Secretary of State is of the opinion that the Direction should be issued because:

- The proposed Project is of national significance, taking into account that it is a large-scale hydrogen production facility with a capacity of 1,065 megawatt (MW) or more thermal.

- The proposed Project will play an important role in enabling an energy system that meets the UK's commitment to reduce carbon emissions and the Government's objectives to create a secure, reliable and affordable energy supply for consumers.

- By progressing the proposed Project through the Planning Act 2008 development consent process, it would provide a fixed timescale for determining any application for development consent that might be brought forward and would allow a single assessment process to be utilised by H2NorthEast Limited.